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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,142	06/26/2001	Hirobumi Aoki	Q64574	1209

7590 09/27/2002  
Sughrue Mion Zinn  
Macpeak & Seas  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3213

EXAMINER

FRONDA, CHRISTIAN L

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 09/27/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/869,142

Applicant(s)  
Aoki et al.

Examiner  
Christian L. Fronda

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1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-58 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

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## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-7, drawn to a process for producing carboxylic acid using a microorganism defective or reduced in the activity of converting a cyano group into an amide group, classified in class 435, subclass 135.
  - II. Claims 8-11, drawn to a variant microorganism being defective or reduced in the activity of converting a cyano group into an amide group, classified in class 435, subclass 252.1.
  - III. Claims 12-16, drawn to a process for producing a carboxylic acid using a transformant transformed with a plasmid containing a nitrilase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequence of SEQ ID NO: 2, classified in class 435, subclass 135.
  - IV. Claims 17-24, drawn to a transformant transformed with a plasmid containing a nitrilase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequence shown by SEQ ID NO: 2, classified in class 435, subclass 252.3.
  - V. Claims 25, drawn to a nitrilase prepared by culturing a transformant transformed with a plasmid containing a nitrilase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequence shown by SEQ ID NO: 2, classified in class 435, subclass 232.
  - VI. Claims 26, 27 and 32, drawn to a process for producing amide compound using a transformant transformed with a plasmid containing a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 3, classified in class 435, subclass 129.
  - VII. Claims 28, 29, and 33, drawn to a process for producing carboxylic acid using a transformant transformed with a plasmid containing an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 135.
  - VIII. Claims 30, 31 and 34, drawn to a process for producing carboxylic acid using a transformant transformed with a plasmid containing both a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5 and an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 135.

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- IX. Claims 35, 36, 41, 42, 47, 48, 49, and 53, drawn to a transformant transformed with a plasmid containing a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5, classified in class 435, subclass 252.3.
- X. Claims 37, 38, 43, 44, 50-52, and 54, drawn to a transformant transformed with a plasmid containing an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 252.3.
- XI. Claims 39, 40, 45, 46, and 55, drawn to a transformant transformed with a plasmid containing both a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5 and an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 252.3.
- XII. Claim 56, drawn to a nitrile hydratase prepared by culturing a transformant transformed with a plasmid containing a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5, classified in class 435, subclass 227.
- XIII. Claim 57, drawn to an amidase prepared by culturing a transformant transformed with a plasmid containing an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 228.
- XIV. Claim 58, drawn to a nitrile hydratase prepared by culturing a transformant transformed with a plasmid containing both a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5 and an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 227.
- XV. Claim 58, drawn to an amidase prepared by culturing a transformant transformed with a plasmid containing both a nitrile hydratase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NOS: 4 and/or 5 and an amidase gene derived from *Rhodococcus* bacterium consisting of a DNA sequence encoding the amino acid sequences of SEQ ID NO: 7, classified in class 435, subclass 228.

- 2. The inventions are distinct, each from the other because of the following reasons:  
Inventions of Groups II, IV, V, and IX-XV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes

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of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The products of Groups II, IV, V, and IX-XV are each independent chemical entities and require different literature searches.

Inventions of Groups I, III, and VI-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The methods of Groups I, III, and VI-VIII are distinct both physically and functionally; require different process steps, reagents, and parameters; and produce different products.

Invention of Group II is unrelated to the processes of Groups III and VI-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups III and VI-VIII do not require the product of Group II.

Invention of Group IV is unrelated to the processes of Groups I and VI-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups I and VI-VIII do not require the product of Group IV.

Invention of Group V is unrelated to the processes of Groups I, III and VI-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups III and VI-VIII do not require the product of Group V.

Invention of Group IX is unrelated to the processes of Groups I, III, VII, and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups I, III, VII, and VIII do not require the product of Group IX.

Invention of Group X is unrelated to the processes of Groups I, III, VI, and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups I, III, VI, and VIII do not require the product of Group X.

Invention of Group XI is unrelated to the processes of Groups I, III, VI, and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups I, III, VI, and VII do not require the product of Group XI.

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Invention of Groups XII-XV are unrelated to the processes of Groups I, III, and VI-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). Each of the processes of Groups I, III, and VI-VIII do not require the product of Groups XII-XV.

Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as using the variant microorganism in a recombinant process to make a polypeptide.

Inventions IV and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as using the transformant in a recombinant process to make a polypeptide.

Inventions IX and VI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as using the transformant in a recombinant process to make a polypeptide.

Inventions X and VII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process of using that product such as using the transformant in a recombinant process to make a polypeptide.

Inventions XI and VIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different

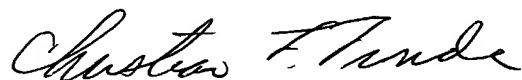
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process of using that product such as using the transformant in a recombinant process to make a polypeptide.

3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L. Fronda whose telephone number is (703)305-1252. The Examiner can be contacted Monday-Friday from 8:30AM - 5:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703)308-3804. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703)308-0196.



Christian L. Fronda  
Patent Examiner  
Technology Center 1600  
Art Unit 1652